

TITLE 326 AIR POLLUTION CONTROL BOARD

#05-116 (APCB)

SUMMARY/RESPONSE TO COMMENTS FROM THE THIRD COMMENT PERIOD

The Indiana Department of Environmental Management (IDEM) requested public comment from June 27, 2007, through July 18, 2007, on IDEM's draft rule language. IDEM received comments from the following parties:

Daniel Valleskey (DV)
Dominion (DM)
Duke Energy (DUKE)
Hoosier Environmental Council (HEC)
Improving Kids' Environment (IKE)
Indiana Utility Group (submitted by Indiana Energy Association) (IEA)
James Simmons (JS)
Marinelle Farrow Morgan (MM)
Mary Doyle (MD)
NIPSCO (NS)
R.D. Skeel (RS)
Robert Walson (RW)
Sue Owens (SO)
Sarah Wassgren (SW)
Thomas Jukes (TJ)
United Mine Workers of America (submitted by Eugene Trisko) (UMWA)

Comments Collected and Submitted by the Hoosier Environmental Council (HEC) to IDEM:

A. Winter
Aaron Pullen
Aaron Scheidler
Aaron Weaver
Abbie Brooks
Abby Katz
Abigail Ogden
Abra Foster
Adam Bryan
Adam Deckard
Adam Young
Aisha Iftikhar
Alex Neville
Alison Byrd
Alison Pitt
Allison Barnes
Althea Strau
Amy Brown
Amy Ira
Amy Taylor
Ananaia R. O'Leary
Andrew Stites
Andrew Sullivan

Andrew Tate
Angela Banks-Stewart
Anne Fijalkiewicz
Anna Greene
Anna Hanthorn
Anne Beadell
Anne Jay
Anne Laker
Annie Greene
Anthony Demor
Anthony Wells
Arec Padgett
Ashley Devon
Ashley Woolen
Aubrie Langherst
Audrey Barcio
B. Mcdonald
B. Moore
B. Rodriguez
Barbara Griffith
Barbara Henn
Barbara L. Downs
Barbara Scott
Becky Applegate
Beena Vaid
Ben Blythe
Beth Kirk
Beth Lunik
Bethany Hayes
Betty Jacobs
Beva Ridders
Bill Piper
Bonnie Hand
Brandie Crouch
Brandon Landers
Brandon White
Brenda Blacklock
Brett Leman
Brian Brown
Brian Leach
Brian Sconce
Brittaney Coundiff
Bruce Pearson
Bryan Anderson
Bunita King
C. Shannon Brown
C. Snyder
C. Wheeler
Camille Richard

Carla Mitchell
Carol Shaefer
Caroline L. Bose
Carolyn Murphy
Carolyn Neiger
Carrie Reynolds
Catherine A. Evers
Catherine A. Molloy
Charles & Amanda Fuhrer
Chris Bolt
Chris C. Cary
Chris Carson
Chris Huettner
Chris Rogers
Chris Walter, Jr.
Christina Moore
Christopher Miller
Christy Duncan
Cindy Moore
Clare Louise Keller
Clay Bowden
Corey Hodges
Corey Pressler
Courtney Tillotta
D. Trider
D.C. Hyde
Dalaena Johnson
Dan Crafton
Dan Walker
Dana Hill
Daniel D. Mark
Daniel Debrule
Daniel Hayford, MD
Daniel Paul Rieger
Danielle Spivey
Dannie Walker
Danny Carter
Daryl Brown
David Adams
David Halt
David Horen
David L. Combs
David Unger
Deana Mills
Deborah Argentinia
Debra Jenkins
Debra R. Shoffner
Dee Brown
Delaney King

Denise Harris-Taggart
Denise Lents
Derek Osgood
Desma Belsaas
Diane K. Umbaugh
Diane Thomson
Dick Dewey
Dionna Waldman
Dolores Lukey
Doris Eller
Doug Jones
Dr. & Mrs. Foyle
Dr. Erin Rabel
Dr. Katharina Dulkeit
Dr. Mark Rogers
Duane Johnson
Dusty McMillan
E. Dunlevy
Edith P. Lacey
Edythe Richardson
Eleanor Troy
Elizabeth C. Brown
Elizabeth Dixon
Elizabeth E. Storey
Elizabeth Johnson
Elizabeth Price
Elizabeth Sloan
Ellen Brennan
Ellie Macfarlane
Elliott Mills
Emily Swager
Eric J. Jones
Eric Johnson
Eric Matheis
Erica Gray
Erika Walker
Erin Radaker
Esther Slabach
Eugene Riley
Florence Maxwell
Francey Freeman
Francis Moore
G. Mohoney
Gail Kincaid
Gary L. Keel
Geraldine J. Yoon
Ginger Hoyt
Goldie Peabody-Dowling
Grant Smith

Gregor Ellis
Hannah Boyson
Hazel Burgess
Heather Cannella
Heather Keller
Heather Miller
Helen Russell
Hester Scultz
Hillary Morgenstern
J. Brown
J. Grant
J. J. Stoner
J. Owens
J. Tolliver
Jack Baker
Jacob Rump
Jacqui Gynn
James Jones
James P. Phea
James Tibbs
Jana Johnston
Jane D. Schmidt
Janet Cooper
Janet Ellis
Janet Sherrill
Janet Thompson
Janice Tucker
Janie Johnson
Janna Van Duke
Jason Anderson
Jason Carr
Jason King
Jason Melch
Jason Steill
Jay Simmons
Jean Fix
Jeff Stephens
Jennie Shively
Jennifer Freeman
Jennifer Hayes
Jennifer Huston
Jennifer M. Patterson
Jennifer Morris
Jennifer Nava Palacias
Jennifer Williams
Jenny Witcher
Jeremy Wright
Jerry Cole
Jerry Dean

Jessica Barnes
Jessica Reynolds
Jessy Delaplane
Jill Andrews
Jo Ellen Eaton
Joan Dykiel
Joann Green
Joanna Greene
Jocelyn Strader
Joe Blum
Joe Walker
Joel Bartenbach
Joelee Smith
John Keppler
John Martin
John Ward
John Weddle
John Winters
John Wolfe
Johnny Gibson, Jr.
Jonathan Beams
Jordan Forney
Jordyn Fox
Joseph Booth
Joseph Cohil
Joseph M. Fedor
Josh Betsey
Joshua W. Pless
Joy Cropper
Judith A. Werner
Juelci Klotz
Julia A. Wright
Julie Cavanaugh
Julie Lynch
Julie Smith
Julie Wechter-Smith
Justin Sims
Justin Smith
Justin Young
K. Daniel
Kaliko L. Allen
Karen Abernathy
Karen Jefferson
Karen Kennedy
Kate Anderson
Kate Mahoney
Kate Turner
Katharine Boehor
Katherine M. Gullick

Kathleen O'Brian
Kathryn L. Kelley
Kathy Moore
Katie Shabi
Kay Thompson
Kay Vivian
Kelly Layman
Ken Sauer
Kenneth Scott
Kent Knorr
Kenya Cockerham
Kevin Collings, Jr.
Kim Allen
Kim Breinstien
Kim Thompson
Kimberly Cook
Kimberly Hilton
Kimberly Hossler
Kit McNally
Krista Tolten
Kristen Hamilton
Kurt Schroeder
Kyle May
L. Anger
Lakeisha Lee
Larry Fuller
Larry Marsh
Larry Turner
Laura Flemins
Laura Hammond
Laura Miller
Lauren Todd
Leann Nani
Leonard Davis
Lesley Meier-Share
Linda Greene
Linda Halliburton
Linda Huber
Linda Price
Lisa Smith
Lissa Morris
Lois Kange
Lori McClanahan
Lowell Warner
Lucas Ballard
Lynae Arronsmith
M. Rosi and T. Rosi
M. Dole
M. Henein

Mable Hankey
Magaret P. Ahearn
Maggie Hoyt
Majorie Rupp
Mandie Palacias
Mandy Smith
Marc Anderson
Marcia A. Winkelmann
Marianne Beck
Marie Browning
Marilyn McCarthy
Mark Smith
Mark Trepton
Marsha L. Shoemaker
Mary Hoffmann
Mary Moore
Mary Stephenson
Matt Ferris
Matthew Belsaas
Matthew Williams
Maureen Ohara
Meachaela Weaver
Megan Mills
Melissa Hunt
Melissa Ternet
Michael Anklin
Michael Buratto
Michael Kenney
Michael Knight
Michael P. Sullivan
Michael Redmond
Michael S. Ladd
Michael Sharp
Michele Chase
Michelle Hackman
Michelle Orr
Mike Hopen
Mildred Dobson
Millie McRae
Mr. & Mrs. James Lakin
Mr. & Mrs. Pryor
Nancy Clement
Nancy Howe
Natalia Schau
Natalie Krause
Nathaniel Johnson
Otis Gibbs
Pam Mahoney
Patrick Perry

Patrick Soja
Patricia Harvey
Patricia J. Lockhart
Patricia J. Williams
Patricia Kerr
Patricia Turner
Patricia Wykes
Patsy Waltner
Paula Fitzgerald
Paulette Lumley
Phil & JoAnne McDaniel
Phil Barao
Phil Martin
Phyllis Teusch
R.W. McClellon
Reba Hogan
Rebecca Clawson
Rebecca Foxworthy
Rebecca Pfaffenberger
Rebecca Ryan
Reed Kurtz
Reggie Moore
Rhonda Owens
Rich Rardin
Richard Furlow
Richard Kline
Richard Ward
Robert & Rebecca Leonard
Robert Dunn
Robert E. Baker
Robert Helm
Robert Macrae
Robert Welch
Romil Saxena
Rosemary Ward
Ruben Ryan
Ruth Jennings
S. Green
S. Powers
S. Schiller
Sandra Moldt
Sandra Moss
Sandy Hocker
Sandy Miller
Sara Jeffries
Sarah & Julius Zuckerman
Anthony Reynolds
Sarah Davis
Sarah Turner

Scott Ahearn
Scott Alfreds
Sean O'Hora
Seth Gonzales
Sharon A. Wilcox
Sherease Powell
Sherise Labu-Caldwell
Sherri Sprinkle
Shirley Brown
Sidney Hayes
Silviane Lunn
Sonja Blessinger
Stacey Harris
Stan Sutton
Stephanie Mitchell
Stephen Hutzell
Stephen Sayer
Steve & Darlene Starkey
Steve Beckley
Steven Krahnke
Stewart Clark Johnson
Sue Foster
Susan Johnson
Susan Mann
Susan May
Tanya Hagerty
Teresa R. Gregory
Teri Jenkins
Teri Rork
Terri Moore
Terri Nash
Terry Stewart
Therese Byerly
Thomas Payne
Timothy Braxton
Tina Heflin
Todd Canfield
Tom Mueller
Tony McDonald
Valorie Graham
Vanessa Rieger
Vicki Seegert
Vicky Hunt
Victor Dykiel
Victoria Erb
Victoria Kennedy
Vincent Phillips
Wayne Staggs
Whitney Pratt

William J. Jones
William Sparks, Jr.
Yolanda Carter
805 unidentifiable commenters (either last name or full name was illegible)

Following is a summary of the comments received and IDEM's responses thereto.

Note: The notice of third comment period requested comments on provisions that were substantively different from the draft rule: clean coal technology incentive and definition of coal-derived fuel. Given the significant input received on this rule, all comments received by the due date were included in this response to comments document.

Definition of “coal-derived fuel”

Comment: The exemption for coal derived fuel that is part of the general distribution fuel pipeline prior to combustion in the definition of “coal-derived fuel” is supported. (IEA) (NS) (DUKE) (UMWA)

Comment: Providing an exception for coal-based syngas would avoid an unintended consequence of CAMR that could deter investments in new coal gasification projects. (UMWA)

Comment: IDEM should continue to work with U.S. EPA to gain their support for this definition change to prevent U.S. EPA approvability issues. (NS)

Comment: IDEM proposed to add the following exclusionary sentence to the definition of “coal-derived rule” in section 2(18): “The term does not include syngas that has been introduced into gas pipelines for general distribution.” IDEM did not propose a definition of “syngas.” The absence of such a definition could lead to uncertainty and confusion. Also, by limiting the exclusion to syngas in “general distribution,” the definition may allow cases of limited commercial distribution, however rare they might be, to transform gas-fired units into “mercury budget units” inadvertently. IDEM should delete the last sentence, and instead add the following clause at the end of the remaining sentence, “except any such gaseous fuel introduced into a gas pipeline for distribution for sale.” (DUKE)

Comment: At 326 IAC 24-4-2(18), the definition for “coal-derived-fuel” in the Indiana proposed CAMR rule includes an exemption for “syngas that has been introduced into gas pipelines for general distribution”. The adoption of this exemption is not approvable. Under 40 CFR 60.24(h)(3), each state must submit a state plan that contains emission standards and compliance schedules that will result in total annual mercury emissions from “electric generating units” (EGUs) not exceeding the applicable annual EGU mercury budget for the state. The term “electric generating unit”, as well as other terms (such as “coal-fired” and “coal-derived fuel”) that are used in defining that term, are defined in 40 CFR 60.24(h)(8). Consequently, Indiana’s state plan under 40 CFR 60.24(h) cannot change the definition of “electric generating unit” and the related definitions of “coal-fired” and “coal-derived fuel”, for example, to create any exception with regard to syngas that in the future might be injected into natural gas pipelines. U.S. EPA also notes that the definition of “electric generating unit” and the related definitions in the definition and applicability provisions of the CAMR model trading rule and, under 40 CFR 60.24(h)(6) and (7), cannot be changed in state trading rules where a state wants to participate in the U.S. EPA-administered mercury trading program. U.S. EPA is aware of the concern raised with regard to the treatment under CAMR of syngas that might be injected into natural gas pipelines and is considering whether any future U.S. EPA action might be appropriate to address this concern. (U.S. EPA)

Response: IDEM has removed this exemption from the definition of “coal derived fuel” in 326 ICA 24-4-2(18) as required by U.S. EPA. IDEM will continue to discuss this issue with U.S. EPA.

Clean coal technology unit

Comment: The addition of a clean coal technology (CCT) unit incentive is supported. (DUKE) (UMWA)

Response: IDEM acknowledges the support.

Comment: The definition of “clean coal technology unit” in section 2(16) could be interpreted, through its

cross-reference to section 2(61)(A)-(F), as referring only to a CCT unit that serves as a replacement for a coal-fired boiler. Also, “subdivision” should be plural. The definition should be revised as follows: ““Clean coal technology unit” means a unit employing any one or more of the technologies listed in subdivisions 61(A) through 61(F) inclusive, regardless of whether the technology or technologies serve as a replacement or not.” (DUKE)

Response: IDEM agrees and has included the suggested change, except “subdivisions” was retained in the singular form in reference to subdivision “61.”

Comment: In section 8(g), the following phrase should be added in the second line after “set-aside”: “or the clean coal technology set-aside.” (DUKE)

Response: IDEM agrees and has included the suggested change.

Allowance Allocation Methodology

Comment: Comments submitted during the Second Notice focused primarily on the inability of current mercury-specific control technology to achieve high levels of mercury reduction, particularly for subbituminous coal. The federal model rule is designed to take advantage of mercury reductions expected to be achieved as a result of installation of more conventional air pollution control technology designed for reduction of SO₂ and NO_x emissions as part of the federal Clean Air Interstate Rule (CAIR). U.S. EPA has acknowledged the difficulty of controlling elemental mercury from subbituminous and other low rank coals and the federal CAMR includes adjustment factors for subbituminous and lignite coals in the mercury allowance allocation formula. However, the IDEM proposal does not adopt these adjustment factors for different coal types. These adjustment factors were used and applied to the historical heat input of Indiana EGUs in calculating Indiana’s equitable share of allowances under CAMR. IDEM should adopt the same adjustment methods used by U.S. EPA to equitably distribute mercury allowances to Indiana and included in the CAMR model rule. Dominion’s State Line station has significantly decreased its emissions of SO₂ emissions by utilizing lower sulfur subbituminous coal, but under this proposal would be penalized for using this more environmentally friendly fuel. (DM)

Comment: IDEM’s proposed fuel-neutral allocation of allowances that disregards coal type is supported. U.S. EPA’s rule is premised upon an initial allocation to states that provides more allowances to units burning western subbituminous or lignite coals than units burning bituminous coals. This allocation reflects U.S. EPA’s uncertainty in 2003-04 about the effectiveness of mercury control technologies in reducing mercury emissions from plants using lower-rank western coals. More recent evidence indicates that western coals likely will be able to achieve 90% or comparable mercury reductions using relatively low-cost carbon injection technology. The commenter believes that U.S. EPA’s allocation methodology penalizes eastern bituminous states by requiring a disproportionately large mercury reduction, potentially leading to large-scale fuel-switching. This issue is currently under litigation before the D.C. Circuit. (UMWA)

Response: IDEM is retaining the fuel neutral approach in the proposed rule for final adoption. This approach will treat all coal types the same regardless of the mercury content of the coal or the ability to remove the mercury.

General

Comment: Indiana’s proposed CAMR rule is based on the CAMR model trading rule as published on March 15, 2005 and as revised on June 9, 2006. In addition, Indiana has incorporated proposed changes to the model rule that were published on December 22, 2006. After the proposed changes to the model rule are finalized, Indiana will need to adopt the finalized changes if they differ from those proposed in December 2006. However, Indiana should not wait until the changes are finalized before proceeding with its rulemaking. In incorporating the proposed changes to the model rule, Indiana included references to the “federal mercury budget trading rule” that has been proposed but not finalized yet. If and when the CAMR federal plan is finalized, Indiana will need to revise these references to cite the provisions of the CAMR federal plan. (U.S. EPA)

Response: IDEM understands that the proposed changes in the model rule may be different when finalized. IDEM will amend the state rule if necessary after the amendments to the model rule are finalized. IDEM has

included the phrase “federal mercury budget trading rule” as a placeholder in the language.

Comment: At 326 IAC 24-4-1(a), given that the rules involve participation in a national trading program, this provision should state, for clarity, that “The following units in Indiana shall be mercury budget units...”. (U.S. EPA)

Response: IDEM agrees and has included the suggested change.

Comment: At 326 IAC 24-4-2(6)(A), in the definition for “Alternate mercury designated representative”, the reference to “CAIR NO_x trading program” should be revised to refer to the “CAIR NO_x Annual Trading Program. (U.S. EPA)

Response: IDEM agrees and has included the suggested change.

Comment: At 326 IAC 24-4-2(37), in the definition of “mercury allowance, the citation “40 CFR 52.24(h)(6)” should be changed to “40 CFR 60.24(h)(6)”. The CAMR rule is in §60.24, rather than §52.24. The CAMR revisions proposed in the *Federal Register* on December 22, 2006 contained a typographical error. (U.S. EPA)

Response: IDEM agrees and has included the suggested change.

Comment: At 326 IAC 24-4-3 and 326 IAC 24-4-4(e)(1), the Indiana rule allows the owners and operators of an unattended source to retain records at a “central location within Indiana.” This provision is not approvable and needs to be removed. The CAMR model trading rule does not provide for this generic option. Instead, an owner or operator may submit a petition to U.S. EPA under 40 CFR 60.4175 (325 IAC 24-4-11(o) in Indiana’s rule) for an alternative to the requirement to keep monitoring and other records on-site. U.S. EPA has in the past approved such petitions but addressed, in its approvals, issues such as exactly what would be the alternative location and what would be the arrangement to ensure that auditors will have ready access to the records. These issues are important to the enforceability of the trading program. (U.S. EPA)

Response: IDEM has discussed the provision for the central retention of records further with U.S. EPA since this comment was made during the third comment period. U.S. EPA has given IDEM confirmation that this provision will be allowed in this rule and the recently adopted Clean Air Interstate Rule (CAIR). This recordkeeping flexibility addresses the practical concerns of affected parties and provides certainty compared to the petition process contained in the federal model rule.

Comment: At 326 IAC 24-4-4(c)(5), this provision states that “no provision of law shall be construed to limit the authority of the department or U.S. EPA to terminate or limit such authorization”. This needs to be revised, consistent with the mercury model trading rule, to refer to “authority of the department or the United States”. (U.S. EPA)

Response: IDEM understands and has included the suggested change.

Comment: At 326 IAC 24-4-8(b)(1), the Indiana rule states that “within thirty days of the effective date of this rule, the department shall submit to the U.S. EPA the mercury allowance allocations for the control periods in 2010, 2011, 2012, 2013, and 2014.” On December 22, 2006, U.S. EPA published the proposed CAMR federal plan. The state should be aware that under the proposed CAMR federal plan it may be the case that, in order for the state allowance allocations to be recorded by U.S. EPA for the first control period (i.e., 2010), the state’s CAMR plan would need to be effective in the state and approved by U.S. EPA, and the allowance allocations would need to be submitted to U.S. EPA, by no later than the regulatory deadline for recording federal mercury allowance allocations for that control period. U.S. EPA proposed December 1, 2007, as the deadline for recording federal mercury allowance allocations. In addition, U.S. EPA proposed that allowance allocations would be made under the CAMR federal plan according to the following schedule: December 1, 2007, for control period in 2010; December 1, 2008, for control period in 2011; December 1, 2009, for control periods in 2012 and 2013; and beginning in 2010 on

December 1 of each year thereafter for the control period in the fourth year after the year of the applicable deadline. Under the proposal, if the federal plan was adopted for a state, a state plan was subsequently approved, and the federal plan was then removed, the state plan allocations would be recorded for any control periods for which federal plan allocations have not been recorded. (U.S. EPA)

Comment: IDEM should continue to work with U.S. EPA to avoid imposition of the CAMR federal plan allocation methodology for 2010 allowances. Indiana, like many other states, is diligently working to finalize the state CAMR rule. IDEM's allocation methodology differs from the proposed CAMR federal plan. If U.S. EPA imposes the federal plan allocation methodology for 2010 upon Indiana it will result in unnecessary confusion regarding allocations for the states and regulated community. The end result would be to add an unnecessary level of complexity, and the corresponding potential for error, in the allowance allocations. (NS)

Response: IDEM is aware that the state's CAMR plan needs to be effective in the state and approved by U.S. EPA before state allowance allocations can be recorded by U.S. EPA for 2010. IDEM is planning to submit a request for partial plan approval under the state allocation option of the federal plan. U.S. EPA has indicated that the final federal plan will include this state allocation option as proposed earlier this year. The state rule should be effective by February 2008, which is around the same time that U.S. EPA has indicated that the federal plan should be published.

Comment: At 326 IAC 24-4-8(e), this provision limits the allocation of new unit set-aside allowances to units lacking a baseline heat input. However, it is possible for a unit to develop a baseline heat input, but still be unable to get an allowance allocation as an existing unit for some control periods because all the allowances for existing units for those control periods were already allocated in advance. For example, a unit commencing operation in 2007 will have a baseline as of the end of 2009, but the first year for which existing-unit allocations will not have already been made as of the end of 2009 will be 2020. If Indiana wants such a unit to continue to get new unit allocations, the provision should be revised to allow allocations to continue where the unit has a baseline heat input but all mercury allowances available under section 8(d) are already allocated. U.S. EPA also notes that section 8(e)(3)(B) uses the emission limit for integrated gasification combined cycle (IGCC) plants in 40 CFR 60.45Da(b) but that all clean coal technology units may not be IGCC plants. (U.S. EPA)

Response: IDEM does intend that a unit should continue to receive new unit allocations in such situations and has included the suggested language. It is IDEM's intention that section 8(e)(3)(B) uses the emission limit for IGCC plants for all clean coal technology units. The IGCC emission limit serves as a basis for calculating mercury allowances under the incentive, the cleaner the unit the more benefit the incentive would provide compared to calculating allowances for new units based on past years mercury emissions.

Comment: At 326 IAC 24-4-8(f), this provision limits the allocation of a clean coal technology set-aside to clean coal technology units lacking a baseline heat input. This raises three issues. First, it appears that Indiana intends that allocations from this set-aside be provided to these units in addition to any new unit set-aside allocations allocated to these units. Second, it is possible for a unit to develop a baseline heat input, but still be unable to get an allowance allocation as an existing unit for some control periods because all the allowances for existing units for those control periods were already allocated in advance. For example, a unit commencing operation in 2007 will have a baseline as of the end of 2009, but the first year for which existing-unit allocations will not have already been made as of the end of 2009 will be 2020. If Indiana wants such a unit to continue to get clean coal technology unit allocations, the provision should be revised to allow allocations to continue where the unit has a baseline heat input but all mercury allowances available under section 8(d) are already allocated. Third, U.S. EPA notes that section 8(f)(3) uses the emission limit for IGCC plants in 40 CFR 60.45Da(b) but that all clean coal technology units may not be IGCC plants. (U.S. EPA)

Response: IDEM does intend that allocations from the clean coal technology set-aside would be allocated in addition to any new unit set-aside allocations. It is also IDEM's intention that allocations are allocated from the clean coal technology set-aside irrespective of whether the unit is receiving allocations as a unit with a baseline heat input or from the new unit set-aside. The language referencing the baseline heat input has been removed and

therefore does not need to be revised as U.S. EPA suggested. As in section 8(e)(3)(B), section 8(f)(3) also uses the emission limit for IGCC plants for all clean coal technology units. The IGCC emission limit serves as a basis for calculating mercury allowances under the incentive, the cleaner the unit the more benefit the incentive would provide compared to calculating allowances for new units based on past years mercury emissions.

Comment: 326 IAC 24-4-11(n)(4)(B)(ii), in this provision the words “document that the flue gas desulfurization system” needs to be revised to read “document that the flue gas desulfurization system was operating properly”. In addition, the clause “the substitute data values...” should be labeled as Section 11(n)(4)(B)(iii) in order to clarify that the provision applies to both Sections 11(n)(4)(B)(i) and (ii). (U.S. EPA)

Response: IDEM agrees and has included the suggested change.

Support for the Proposed Rule

Comment: Final adoption of the preliminarily adopted rule is supported. (IEA) (UMWA)

Comment: The proposals presented by the Hoosier Environmental Council (HEC) and Improving Kids' Environment (IKE) are opposed. (IEA)

Comment: Final adoption of the preliminarily adopted rule is supported. The decision by IDEM and the air pollution control board (board) to base Indiana's rule on CAMR is supported. There has not been any additional information published or provided since preliminary adoption of the rule to lead the commenter to believe that the timing or stringency of the proposed rule should be modified from its current form. (NS)

Comment: IDEM's efforts to develop reasonable regulatory requirements to further the air quality goals of Indiana are supported. (DM)

Comment: Comments submitted by the Indiana Energy Association (IEA) on behalf of the Indiana Utility Group are supported. (NS)

Comment: Serious questions remain regarding the feasibility of mercury control technology. Research on the testing of potential control technologies and configurations is ongoing. The results are mixed based on the types of plant configurations and the types of fuel a power plant uses. Indiana EGUs equipped with hot-side electrostatic precipitators (HESP) are less likely to routinely achieve higher levels of mercury reductions due to the fact less mercury is inclined to be captured on the fly ash as is the case with cold-side electrostatic precipitators (CESP) equipped plants. Another concern is the installation of activated carbon injection (ACI) on old or small plants where the amount of sorbent needed to capture significant levels of mercury is cost prohibitive. Mercury emissions reductions for plants relying on Powder River Basin (subbituminous) coal is unpredictable. The only approach which has shown to produce significant mercury capture, for short periods of time, is sorbent injection. A major concern with using ACI is that some utilities may find it impossible to market this ash for use as cement replacement in the manufacturer of concrete. While the debate continues regarding “commercial readiness” of these technologies there are many questions to be answered. (IEA)

Comment: A reduction in Indiana mercury emissions most certainly does not lead to a corresponding reduction in Indiana mercury deposition. A reduction in mercury deposition may not lead to a reduction in health risk to Hoosiers due to the complexity of mercury methylation in water and corresponding methylmercury levels in fish that are consumed by Hoosiers. The Indiana specific modeling scenario conducted by Atmospheric and Environmental Research, Inc. (AER) modeled deposition for 2020 after implementation of a CAIR/CAMR scenario and found those reductions would lead to an average 13% reduction in mercury deposition from 2004 levels in Indiana. By contrast, a CAIR/CAMR/90% Indiana scenario would lead to an average 14% reduction in mercury deposition in Indiana from 2004 levels. Reductions in mercury emissions beyond CAMR, either a 90% reduction or the IKE compromise proposal to lower the Phase II cap, will result in little additional health benefit. There are also diminishing returns in health benefits beyond CAMR because the elemental mercury that remains is the type of mercury that is transported thousands of miles and is not the form of mercury that is bioaccumulated. (IEA)

Comment: The mercury deposition analysis conducted by U.S. EPA in connection with the CAIR and CAMR rules suggest that Indiana stands to be a major beneficiary of mercury deposition reductions as a result of the

CAIR rule. The deposition reductions in Indiana due to the co-benefits of CAIR are approximately equal to those resulting from a hypothetical “zero-out” of all mercury emissions from EGUs throughout the United States. (UMWA)

Comment: The IDEM and IUG analyses that indicated compliance with CAMR will cost between \$64 million and \$68 million annually by 2018 and compliance with the HEC 90% proposal will cost between \$207 million and \$373 million annually beginning in 2010 are outdated. Capital costs have risen dramatically since this data was analyzed. IUG estimates are that the IKE proposal will cost an additional \$70 million annually beyond CAMR costs or additional \$560 million total to implement when compared to the preliminarily adopted rule. This is driven by the fact that Indiana EGUs would have approximately 5,600 fewer allowances allocated to them, compared to CAMR, starting in 2015 and for the following eight years of the program. These allowances would have to be purchased at an estimated average cost of \$53,000 per pound. Cost of control cannot be overlooked. Indiana EGUs continue to face a number of costly regulations. Energy costs also impact low income Hoosiers like never before. A recent study by Roger Colton, a recognized expert in energy affordability, illustrates the growing dilemma many Indiana households face in paying their home energy bills (report attached to IEA comments). According to this report, 100,000 Indiana households live with income at or below 50% of the federal poverty level. Those particular families pay over 48% of their annual income simply for their home energy bills. This is not only an issue for the very poor, as home energy bills for households with incomes between 75-100% of the poverty level take up almost 14% of family income. (IEA)

Comment: Timing of control construction is a concern to industry. A recent report produced by J. Edward Cichanowicz on behalf of the Utility Air Regulatory Group highlights the many cost, supply and scheduling concerns as the utility industry heads in to what could easily be termed an unprecedented construction period (report attached to IEA comments). (IEA)

Comment: CAMR allows regulated parties the certainty needed to prudently plan and decide how to achieve the progressively more stringent emission cap in the most cost-effective manner on their respective systems. It will provide time for the mercury specific emission control technologies to become better developed. The CAMR-based rule is protective of human health in that it considers the following: the form of mercury that is a concern for human health is not directly emitted by Indiana coal-fired EGUs, but results from the biological transformation of the mercury deposited from the various sources into water bodies. It is not until methylmercury in fish tissue is consumed in quantities above the RfD that there is concern for adverse impacts. CAMR relied upon U.S. EPA’s conservative reference dose (RfD) for methylmercury in fish. (NS)

Comment: The board should consider the implications of alternative mercury control proposals. Alternative proposals could lead to fuel-switching and the reduction in use of high-sulfur coals found in Indiana. A majority of Indiana EGUs burn bituminous coals. Indiana coals have, on average, mercury content similar to western Powder River Basin (PRB) coal. Because it is cheaper to reduce large fractions of mercury emissions by the use of ACI with western subbituminous coal than with scrubbers and selective catalytic reduction (SCR) applied to Indiana coals, Indiana coals would be at risk of fuel switching if generators were required to meet inflexible mercury control limits. (UMWA)

Comment: Indiana has several coal generating units smaller than 300 megawatts (MW) and more than 40 years of age. These units are the most “at risk” of premature retirement if confronted with inflexible mercury control mandates. The combination of wet scrubbers and SCR at units burning bituminous coal can achieve co-benefit mercury reductions of 85% or more. For many older and smaller units these control are not cost-effective. These units would have to comply with purchases/transfer of allowances or install ACI. A recent summary of ACI performance shows units burning bituminous coals with ACI may be limited to mercury reductions of 50% to 70%. (UMWA)

Comment: The U.S. Court of Appeals for the D.C. Circuit will determine the legality of mercury emissions trading. It is not appropriate for the board to prejudge the outcome of this litigation. The Clean Air Act is replete with emission allowance trading programs for other substances with adverse health effects; NO_x emissions in Title I and sulfur dioxide in Title IV. Toxic lead in gasoline was eliminated in a cost-effective manner through a trading program among petroleum refiners. (UMWA)

Comment: The key advantages for CAMR in Indiana are the incentives for plants to over-control mercury emissions, banking of allowances for early reductions, and the compliance certainty needed to secure financing for pollution control projects. (UMWA)

Response: IDEM understands the comments and has proposed a rule for final adoption based on the federal rule.

Support for going beyond the federal CAMR

Comment: IDEM can help the people of central Indiana by enforcing the air quality standards already on the books. The quality of air is not good enough for people to breathe. Many businesses and factories have not been responsible in reducing pollution of Indiana's air and rivers. Please bring violators to court when needed and make company officers become more responsible citizens. (RW)

Comment: The commenter encourages IDEM to support a mercury rule that requires a 90% reduction in mercury by 2010. Mercury is a known health hazard and Indiana should not be out of step with other states on this important matter. Pollution has costs, both in clean up and prevention, but an even greater cost is people's health. (JS)

Comment: Indiana's mercury emissions from coal-fired power plants are among the highest in the nation, putting thousands of children at risk of irreversible brain damage and nervous system damage each year. This is unacceptable, considering that multiple companies have effective and affordable controls that can reduce power plant mercury emissions by 90%. IDEM should direct the board to implement a regulation that requires this technology to be used by 2010. (MD) (TJ)

Comment: Indiana should have cleaner air and water. (SO)

Comment: As a recent resident of Illinois the commenter is concerned that environmental regulation is more lax here than Illinois. Please require Indiana power plants to reduce mercury emissions to truly safe levels, at least as low as Illinois. (RS)

Comment: As a life-long resident of Indiana with a family the commenter is concerned with the high level of mercury emissions and supports the HEC petition. (SW)

Comment: Please have Indiana pass a mercury rule that requires a 90% reduction in mercury emissions by 2010. The monies needed could be raised by a \$1 to \$3 increase in the electric bills of consumers. (MM)

Comment: Indiana should pass a mercury rule that requires a 90% reduction in mercury emissions by 2010. Federal guidelines are not stringent enough. The cost of reducing mercury emissions is worth it. Higher electricity bills may make society more careful in how much is used. (DV)

Comment: Mercury emission from power plants can and should be reduced more quickly and to a greater extent than required in the federal rule. It was heartening that four of the board members, including the medical and manufacturing representatives, were also persuaded that Indiana should provide greater protection to the public health and that it would be reasonable to do so. IDEM and the board members should consider adoption of the compromise option offered by IKE. This rule has generated extensive public interest and input. Citizens across the state are asking for greater health protection. (IKE)

Comment: Recent research by U.S. EPA provides further support for the conclusion that local emissions are a major contributor to local deposition. See, *Model-Based Analysis and Tracking of Airborne Mercury Emissions to Assist in Watershed Planning Final Report* (U.S. EPA, November 30, 2006), (report attached to comments). This analysis used emissions information and a model to calculate the relative contributions of in-state and out-of-state sources to the area of highest mercury deposition in a number of states. For Indiana, that spot is in the southwestern part of the state. The model determined that 56.7% of the total mercury deposited at that location was from Indiana sources, and of that amount 93.1% came from the nearby American Electric Power plant in Rockport, Indiana. Like all studies, this one has limitations. This study does not end the debate about mercury deposition, but it is further evidence in support of other recent studies that have concluded that there is significant local deposition from coal-fired power plants. (IKE) (HEC)

Comment: Recent research shows that reactive mercury deposited in surface waters is rapidly converted to methylmercury and rapidly gets into the food chain. See, *Experimental Evidence of a Linear Relationship between*

Inorganic Mercury Loading and Methylmercury Accumulation by Aquatic Biota (Environ. Sci. Technol. 2007, 41, 4952-4958), (report attached to comments). The researchers added isotopically enriched mercury (Hg II) to a series of small test lakes and tracked its appearance in the lakes' food chains. They found that it took only five to ten weeks for the added mercury to appear as methylmercury in fish. Further, the amount of methylmercury in the fish was directly proportional to the amount added to the lake. (HEC)

Comment: More power plants are moving ahead with installation of mercury control technology. In its June 2007 report of bookings for installation of mercury control technology, the Institute for Clean Air Companies reports 27 units in Midwest locations working to install technology, primarily activated carbon (table from report attached to comments). Control options are available. (IKE)

Comment: The commenter is disappointed in IDEM's and the administration's continued support for the federal minimum and is heartened that four board members cast their votes against adopting the minimum and argued in favor of going beyond the minimum. IDEM and the board are urged to reconsider more protective controls on Indiana's mercury emissions. (HEC)

Comment: The commenter has only two points to add to previous comments made throughout the rulemaking process: 1) that IKE's proposed compromise between CAMR and the HEC petition deserves more serious consideration and 2) that data continue to accumulate showing that mercury from U.S. power plants is harmful and can be reduced sooner than required by CAMR. IKE proposed a compromise that would make only two changes to the draft rule by moving the Phase II compliance date to 2015 and changing the Phase II cap to 1,200 pounds. While this is not the most protective option that HEC was lobbying for, it would be an improvement over CAMR. This proposal is feasible and gives the industry nearly eight years to comply. (HEC)

Comment: The Hoosier Environmental Council (HEC) collected comments from citizens concerned about mercury emissions from coal-fired power plants in support of the petition to reduce mercury emissions by 90%. (HEC list of commenters)

Response: IDEM understands the concerns expressed by the public throughout this rulemaking regarding the health effects of mercury and appreciates the effort that so many citizens made to get involved in the rulemaking process. Due to uncertainties with the expected additional health benefits and costs of going beyond the federal rule IDEM continues to support a rule for final adoption based on the federal rule. The proposed rule will reduce mercury emissions from coal-fired power plants in Indiana by a substantial amount while ensuring continued electricity reliability and affordability.